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each clip comprising a plurality of fan folded sheets, each sheet of the clip joined to at least one adjacent sheet by a weakened line wherein the weakened line is formed in a machine direction of the sheets and the weakened line is located at an end of each sheet when such sheet joins the end of the adjacent sheet by the weakened line; and

each clip joined to an adjacent clip by a sheet of one clip being separably joined to a different sheet of a succeeding clip.

As required, accompanying herewith are marked-up pages showing these changes to the claims.

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### Remarks

Claims 3, 10-17 and 20 have been cancelled. Claims 1, 7 and 18 have been amended. Claims 1, 2, 4-9, 18, 19 and 21-23 are pending. No new matter is added.

By way of the Office Action mailed October 17, 2002, the drawings and specification were objected to as noted in the Office Action. In accordance with the Examiner's recommendations, the Applicant has made changes to the drawings and specification which add the clarity needed, and in no way restrict the scope of the invention. Accordingly, the objections to the application in this regard are requested to be withdrawn.

By way of the Office Action mailed October 17, 2002, a preliminary double patenting rejection has been made. Without agreeing or disagreeing with that rejection at this time, Applicant reserves the right to do so when and if the provisional rejection becomes final.

By way of the Office Action mailed October 17, 2002, claims 1-6, 7-9 and 18-23 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Craig et al.* (US 6,286,712) in view of *Mertens* (US 4,768,810). This rejection is respectfully traversed to the extent that it may apply to the presented claims. Applicant submits that the rejection of these claims is now moot, because as amended, none of the art of record, alone or in combination, teaches or suggests the presently claimed invention. For example, the present invention recites at least two clips of fan folded sheets. Within each clip, it further recites that each sheet is joined to an adjacent sheet by a weakened line (e.g., weakened line as taught in Applicant's specification at page 5, lines 19-20). This is completely contrary to the teaching in *Craig et al.* which only teaches interfolded sheets. There is simply no teaching or possibility within *Craig et al.* which would allow its teaching to be modified to comprise the recited weakened line relationship.

*Mertens* does not compensate for this deficiency. *Mertens* is a single stack of perforation connected sheets. There is no teaching for forming at least two clips of fan folded material. While each sheet in the *Mertens* stack is perforation connected, as now recited the weakened line relationship is located at an end of each sheet when such sheet joins the end of the adjacent sheet by the weakened line, in the clip. As such, the perforation lines 12/22/32 in *Mertens* are formed in the cross machine direction (i.e., where the machine direction would be moving in the direction left (or right) relative to Figure 2 in *Mertens*). Accordingly, this is contrary to another recited feature of the invention (i.e., the weakened line is formed in a machine direction). To form clips as recited by Applicant is contrary to *Mertens*, and then to form them such that the weakened line is formed in the machine direction of the sheets within the clip is further contrary to *Mertens*. Accordingly, the rejection of the claims based on *Craig et al.* in view of *Mertens* is requested to be withdrawn.

In conclusion, all of the grounds raised in the outstanding Office Action for objection to or rejecting the application are believed to be accommodated, overcome or rendered moot. Thus, it is respectfully submitted that all of the presently presented claims are in form for allowance and such action is requested in due course.

Also submitted at this time is a request for a one month extension of time. This extension is timely for one month since February 17, 2003 (the exact one month date) was a Federal Holiday; and this is being filed on the next business day, February 18, 2003.

Please charge any prosecutorial fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875.

The undersigned may be reached at: 920-721-6854.

Respectfully submitted,

Gerald Keith Sosalla

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CERTIFICATE OF FACSIMILE TRANSMISSION

I, Dianna M. Rockey, hereby certify that on February 18, 2003, this document is being facsimile transmitted to:  
Attn: Examiner Louis B. Tran (703-872-9302), Assistant Commissioner for Patents, Washington, D.C. 20231.

By: Dianna M. Rockey  
Dianna M. Rockey

**MARKED-UP CLAIMS**

1. (Amended) A stack of fan folded material comprising:  
at least two clips of fan folded material;

each clip comprising a plurality of fan folded sheets, each sheet of the clip joined to at least one adjacent sheet by a weakened line wherein the weakened line is formed in a machine direction of the sheets and the weakened line is located at an end of each sheet when such sheet joins the end of the adjacent sheet by the weakened line; and

each clip joined to an adjacent clip by a sheet of one clip being separably joined to a different sheet of a succeeding clip.

7. (Amended) A stack of fan folded material comprising:  
at least two clips of fan folded material;

each clip comprising a plurality of fan folded sheets folded along a machine direction of the sheets, each sheet of the clip joined to at least one adjacent sheet by a weakened line formed in the machine direction of the sheets wherein the weakened line is located at an end of each sheet when such sheet joins the end of the adjacent sheet by the weakened line; and

each clip joined to an adjacent clip by a last sheet of one clip being adhesively joined to a first sheet of a succeeding clip.

18. (Amended) A stack of fan folded material comprising:  
at least two clips of fan folded material;

each clip comprising a plurality of fan folded sheets, each sheet of the clip joined to at least one adjacent sheet by a weakened line wherein the weakened line is formed in a machine direction of the sheets and the weakened line is located at an end of each sheet when such sheet joins the end of the adjacent sheet by the weakened line; and

each clip joined to an adjacent clip by a sheet of one clip being separably joined to a different sheet of a succeeding clip.

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It is to be understood that both the foregoing general description and the following detailed description are exemplary and are intended to provide further explanation of the invention claimed. The accompanying drawings, which are incorporated in and constitute part of this specification, are included to illustrate and provide a further understanding of the various aspects of the invention. Together with the description, the drawings serve to explain

### BRIEF DESCRIPTION OF THE DRAWINGS

10 The present invention will be more fully understood and further features will become apparent when reference is made to the following detailed description of the invention and the accompanying drawings. The drawings are merely representative and are not intended to limit the scope of the claims. Like parts depicted in the drawings are referred to by the same reference numerals.

15 Figure 1 representatively shows a schematic view of an apparatus and process for forming a stack of fan folded material, in accordance with the present invention.

Figure 1A representatively shows a cross sectional view of a portion of the apparatus of Figure 1, taken along the line 1A-1A.

20 Figure 2 representatively shows a front view of a portion of an arched roller assembly and folding assembly for use with the present invention, similar to that seen in Figure 1.

Figure 2A representatively shows an enlarged side view of a portion of the arched roller assembly and folding assembly taken along the line 2A-2A of Figure 2.

25 Figure 2B representatively shows an enlarged front view of a portion of the folding assembly taken along the line 2B-2B of Figure 2A.

Figures 3, 3B, 3C and 4 representatively show schematic side views of clips of fan folded sheets, in accordance with the present invention.

Figures 3A and 4A representatively show schematic top views of a portion of the sheets of Figures 3 and 4, respectively.

30 Figure 5 representatively shows a side view of a pair of shear slitters for use with the present invention.

Figure 5A representatively shows an edge view of the pair of shear slitters in Figure 5.

35 Figure 6 representatively shows a partial cross-sectional view of a roller journal unit for use with the present invention.

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along an edge. Adhesive can be applied by various techniques known to those of skill in the art. For example, when the sheets comprise wet wipes, some such ways are described in a U.S. patent application filed separately but concurrently herewith entitled, "PROCESS FOR JOINING WET WIPES TOGETHER AND PRODUCT MADE THEREBY" of Inventors Yung H. Huang et al., U.S. Serial No. 09/870,815 *Filed May 31, 2001* assigned to the same assignee of this application ~~and known by attorney docket number 15,991~~, which application is incorporated herein by reference.

The ribbon with adhesive applied thereto travels on to a cutter assembly 100, which includes a rotary cutter 102 and anvil roller 104. The ribbon is then cut into discreet pieces, called clips 20, which then pass to a stacker assembly 110. The stacker assembly includes a stacker belt 112 and stacker rollers 114 which are an idler roller and a drive roller. In the stacker assembly 110, the clips 20 are stacked one upon the other and thereby the adhesive 92 on the top sheet of a clip adheres to a bottom sheet of the subsequent clip that is stacked on top of it. A desired number of clips are stacked one on top of another and adhesively joined in this manner. An example of such an apparatus for use as the stacker assembly is provided with a variety of conventional wet wipe machines sold by Paper Converting Machine Company of 2300 S. Ashland Ave., Green Bay, Wisconsin 54307, under the tradename Triton™ Wet Wipes Machine. Other stackers that could be employed are those supplied with a ZFV™ folder, sold by Elsner Engineering of Hanover, Pennsylvania USA or a Serv-O-Tec™ folder sold by Serv-O-Tec in Lagenfeld Germany (Serv-O-Tec is a division of Bretting Mfg. in Ashland WI, USA). Then, the completed stack is moved to a packaging assembly (not shown) where the clips can be put in various types of dispensers (e.g., tubs, bags, etc.) and then made ready for commercial sale and use.

Generally, and referring to Figures 3 to 4A, inclusive, the invention relates to a stack 10 of at least two clips 20 where each clip comprises at least two sheets 22 separably joined together along a weakened line 24. Each clip 20 is separably joined to an adjacent clip, e.g., advantageously by the last sheet 22a of one clip being joined to the first sheet 22b of a succeeding clip. Stacks of fan folded material within the scope of the invention can have any sheet in one clip joined to any sheet in a succeeding clip as long as dispensing of sheets from a preceding clip dispenses simultaneously at least one sheet of a succeeding clip so as to continue successive dispensing of the entire stack 10, as desired. The sheets 22 in Figure 4 are also a plurality of individual sheets like those in Figure 3, although each sheet is not separately numbered as in Figure 3. The sheets 22 in Figure 3B are also a plurality of individual sheets like those in Figure 3. As seen in Figures 3A and 4A, a top view of a portion of the sheets in the clips shows the individual

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data for the perforation joint was obtained by measuring the peak load for seven perforation joined sheets in a clip of eight sheets and taking the average of the seven measurements. The peak load data for the adhesive joint was obtained by measuring the peak load for three or four adhesively joined sheets between five clips of eight sheets and taking the average of the four measurements. The dispensing force per unit width or "normalized dispensing force" as used herein, is the dispensing force divided by the width of one sheet along the separably joined edge adjacent the second sheet.

To obtain the dispensing force data for the table, the identified samples were dispensed from three different dispensers, following the above test procedure. Type 1 was that known as currently available PAMPERS® One-Up® of the Procter & Gamble Company of Cincinnati, Ohio 45202, USA. Type 2 was that seen in Figure 1 (i.e., the shown flexible orifice but with the container like that seen in Figure 2) of a U.S. Patent application filed separately but concurrently herewith entitled, "FLEXIBLE ORIFICE FOR WET WIPES DISPENSER" of inventors Yung H. Huang et al., U.S. Serial No. 09/870,715, assigned to the same assignee of this application ~~and known by attorney docket number 16981A~~ which application is incorporated fully herein by reference. Type 3 was that seen in Figure 2 of the just cited U.S. Patent application filed separately but concurrently herewith entitled, "FLEXIBLE ORIFICE FOR WET WIPES DISPENSER" of inventors Yung H. Huang et al.

Figures 16 and 17 (with reference to Figures 3A and 4A for weakened line joint 94 and to Figures 14A to 15B inclusive which specifically show two possible adhesively joined configurations), illustrate the test for measuring the detach for two separably joined wipes. Figures 16 and 17 specifically show two adhesively joined sheets being separated, and though not shown two perforation joined sheets would be similar except as noted below. The testing is done, generally, under TAPPI standard procedures and conditions which would be applicable except as otherwise noted. A SINTECH™ Model # M4001 with a MTS 25 pound (11.4 Kg) load cell conventional test machine 170 equipped with TestWorks™ 3.10 software for Windows, or comparable equipment, is used. Both the Sintech™ test machine 170 and TestWorks™ software are available from MTS Corporation located at 1400 Technology Drive, Eden Prairie, Minnesota, USA. The measurement procedure begins by providing two separably joined wipes, e.g., carefully removing two adhesively joined wipes or two perforation joined wipes from a stack of wipes without materially disrupting the joint between the two wipes. Next, the distance between two jaws 172, 174 of machine 170 are set about two inches (5 cm) shorter than the end to end distance (perpendicular to the joint 94) of the wipes 22. For two adhesively joined wipes as in Figures 14A and 15A, the joint is seen as 94. For two perforation